

Blackstone River Valley National Heritage Corridor Natural Resources Inventory and Assessment

EXECUTIVE SUMMARY

The Next 10 Years will be an exciting time of renewed commitments to reveal, preserve and interpret the historical, cultural and natural resources of the Blackstone River Valley National Heritage Corridor. Natural resources and the systems that link them — geology, hydrology and habitats — are important to the historic and cultural landscapes that we value and wish to preserve. The natural and built environments are inextricably linked. Preserving key natural landscapes enhances historic settings, and protects the natural systems that are shared throughout the Valley and are vital to the region's health.

The Natural Resources Inventory and Assessment is offered as an overview and selective description of the natural significance of the Blackstone River Valley National Heritage Corridor. The analysis identifies a rich array of the most important sites, and leads to specific recommendations for action.

THE PURPOSE OF THE INVENTORY IS THUS THREE-FOLD:

- to reveal the natural features and systems of the Corridor which contribute to the understanding of national cultural landscape values;
- to recommend strategies for protection, restoration, management, or acquisition; and
- to provide a framework for local and regional decision-making.

By better understanding the role of natural resources in our history, in our present environment and in our daily well-being, we as individuals and communities will make better decisions for the future. Building on past and on-going efforts to remedy environmental problems, protect land and water for the enjoyment and health of generations,

and unlock the potential of recreational resources, communities in the Valley are actively living their history and shaping their environment.

Process

To begin the inventory and assessment of the Valley's resources, several maps and sources of information were collected and key people interviewed. An advisory committee was formed, representing agencies involved in natural resource management and private groups involved in resource advocacy and stewardship. A survey was distributed to members of the advisory committee as well as to other interested parties, local communities, non-profit groups and local organizations, asking them to list and describe their priority natural resources sites. A framework for evaluation was developed in the form of a matrix listing sites and allocating categories of Natural Values: Geology, Hydrology, Vegetation and Habitat, categories of Cultural Values: Traditional Land Use, Scenic, and Historic, and categories of Local and Regional Significance. The advisory committee then discussed each of the sites and ascribed to them values of high, medium or low under each category of resource attribute.

Inventory Matrix

The result of this analysis was an Inventory Matrix of 70 sites, identified on the Natural Resource Sites map in the report. Each site shows a distribution of high, medium or low ranking under categories of Natural and Cultural Value and a description of the issues facing the resource. A sample page of the Inventory Matrix is appended in the report. Sites with highest Natural and Cultural values were culled from the Matrix for further study of their attributes and to develop recommendations for action.

LOCAL PLANS AND CORRIDOR INITIATIVES

To this analysis was added a review of local planning documents, including Open Space and Recreation Plans, as well as the record of past and ongoing initiatives of the Corridor Commission and its partners. These additional sites represent local planning efforts, preservation priorities and projects likely to merit continued support.

Regional Impacts

A review of regional impacts from growth and development pressures on the resources of the Valley was used to evaluate common threats and to refine recommendations. Trends were identified through interviews with regional planners, representatives of regulatory authorities and private non-profit organizations, as well as from published sources. Maps included in this section of the report show Transportation and Growth Patterns, Impacts on Services and Impacts on Water Resources. Two aerial photographs of the region surrounding Ashton and Old Ashton Villages in Cumberland and Lincoln, Rhode Island — one from 1939 and one from 1992 — are used to illustrate changes in the landscape and to discuss the cumulative role of local land use decisions in affecting regional environmental resources.

Subregions

Communities in the Blackstone Valley were grouped into nine subregions. The primary reason to consider smaller sections of the Valley was to examine various natural systems, such as waterways, marshes, forests, etc., in the context of municipalities sharing common ecosystems. There were no dominant criteria for organizing the subregions in a particular way: some communities could have been grouped with another subregion just as easily, emphasizing the connection with a different natural system. The important point of examining subregions is to recognize that municipalities need to cooperate with their neighbors to manage and benefit from natural resources existing across political boundaries.

RECOMMENDATIONS

More than a list of important sites, the report offers a series of recommendations around key resources, for a variety of public and private actors to undertake.

A description of the natural resource, of the issues affecting it, and of recommended actions for the Corridor Commission and its partners were developed for River sites, Valley sites and other resources grouped by subregion.

River sites (16) include those which were evaluated as having high significance in natural and cultural value, as well as those where past and ongoing initiatives on the part of the Commission and other actors make them particularly noteworthy.

Valley sites (5) were selected from the Inventory as those having high value and also demonstrated past and ongoing initiatives. Other high value sites in the Valley are mentioned in the recommendations by subregion. River and Valley sites are identified on a map of Natural Resources Sites in the Inventory and Assessment report.

Recommendations for 9 subregions include strategies and actions that affect several resources at once and could be more successfully undertaken by communities working together rather than individually. Maps of the 9 Subregions are included in this section, identifying the River and Valley sites of the Inventory Matrix that fall within each subregion, and additional sites, identified in local planning documents, which have important local significance as scenic resources, water resources or key open spaces.

In all, the report contains 70 sites evaluated on the Inventory Matrix, 21 descriptions of unique resources and the issues they face, and well over 100 recommendations for sites and subregions. The result is an assessment of the natural resources of the Blackstone Valley and of the array of local and regional actions, current and suggest-

ed, that promise to be most successful in preserving and enhancing the Corridor's unique assets.

Actions on the part of local communities, federal and state agencies, key institutions, organizations and individuals, with the support and partnership contributions of the Corridor Commission, will result in a healthy natural environment and appropriate land use patterns for the whole Valley. Controlled locally and coordinated regionally, a better-managed landscape of natural resources is an appropriate setting for the preservation, enhancement and appreciation of the cultural and historic resources of a Heritage Corridor with national significance.

SELECTED EXAMPLES OF RECOMMENDATIONS RIVER SITES

Blackstone Gorge (Blackstone, North Smithfield)

Assist Massachusetts (MA) and Rhode Island (RI) Departments of Environmental Management (DEM), the Metacomet Land Trust and others in continued land protection in and around the Gorge, and continue to facilitate purchases through conservation organizations like The Conservation Fund.

Continue to convene state and federal resource agencies to address streamflow issues.

Rice City Pond / Goat Hill Lock (Uxbridge)

Support the engineering evaluations of the MA Department of Environmental Protection (DEP) and the Army Corps of Engineers (ACOE) to control pollution at Rice City Pond, and encourage DEP and ACOE to work with MADEM to incorporate DEM concerns into pollution control strategies.

Whitinsville Reservoir System (Sutton, Douglas, Northbridge)

Encourage the protection of the Whitinsville Reservoir and its watershed in advance of surrounding development.

Incorporate model gravel pit redevelopment into the curriculum of the proposed Blackstone Valley Institute as one Valley-wide issue to tackle.

Encourage efforts like the development of the Linwood Pond Trail by the Town of Northbridge and Conservation Commission for public enjoyment of the Reservoir System.

Lime Rock (Lincoln)

Initiate a protection and interpretation strategy with the Town, property owners and other partners as soon as possible in anticipation of the cessation of the quarry operations.

Work with the Conklin Lime Co. to help determine a timeline for the actual closing of the quarry to ensure adequate planning for the preservation of the site.

Fisherville Mill and Pond (Grafton)

Establish Fisherville Mill and Pond as a high priority site as it represents the convergence of several key goals of the Corridor: environmental remediation, historic preservation, economic development, and wildlife habitat restoration.

Support the continued concerted efforts of the public and private groups already involved, and the recruitment of new parties such as: the property owner, the Army Corps of Engineers, the MA DEP and Fish and Wildlife, the Town of Grafton, the Central Massachusetts Economic Development Authority (CMEDA) and advocacy groups such as Ducks Unlimited.

Rockdale Pond (Northbridge)

Encourage the MADEM and other potential partners to help identify the sources of contamination. Depending on the results, removal of contaminants might be possible.

Encourage the Army Corps of Engineers to apply successful solutions to Rockdale Pond that may emerge from MADEM's investigation of stabilization and bioengineering at Rice City Pond.

Confluence of Middle and Blackstone Rivers (Worcester)

Support the development of a continuous Greenway along the River.

Support the development of the Blackstone River Valley National Heritage Corridor northern Visitor Center, and encourage the City of Worcester, MADEM and additional partners if necessary to devote the area around the convergence, including the northwest corner of the Patriot Metals site, to the Visitor Center, to parkland, to greenway/river access and to interpretation of historic resources.

VALLEY SITES

Intact Western Forests (Douglas, MA, western Burrillville and Glocester, RI)

Continue to oppose the proposed sanitary landfill in Douglas State Forest as a direct threat to natural and cultural resources significant to the Heritage Corridor.

Support continued land protection of the forests and adjacent properties by the Towns, conservation organizations, and the State DEMs.

Support the development of the North/South Trail by RIDEM as an important recreational feature in the Corridor, and encourage a link to northern portions of the forest.

Daniel's Farm (Blackstone)

Continue to work with the property owner, the Metacomet Land Trust and the Town of Blackstone toward a comprehensive preservation solution.

As an interim step, collaboratively develop a management plan for the property assuming a life estate for the owner.

Chase Farm (Lincoln)

Promote the Historic Landscape Assessment Report to the Town of Lincoln and relevant agencies in order to address preservation of the agricultural landscape.

Collaborate with the Town and other property owners to establish a trail network to connect sites along Great Road and interpret the area.

Waters Farm (Sutton)

Encourage the Towns of Sutton and Douglas to explore early planning tools to avoid the visual intrusions that infringe on River Bend Farm in Uxbridge

Purgatory Chasm (Sutton)

Support continued land protection by MADEM and others around and within the State Park to better secure the resource.

SUBREGIONS

Worcester/Leicester

Support the City of Worcester, Mass Audubon and others in river protection projects to open or "daylight" brooks and waterways now in culverts. Support in particular the continued investigation of Beaver Brook and Broad Meadow Brook.

Encourage the City to continue to correct problems associated with illegal sewer connections and sewage overflow in the Blackstone River.

Assist the Town of Leicester and the Worcester Airport in reaching agreement on how to mitigate the impacts of airport surface runoff on the surrounding waterway. Issues include silting and the release of de-icing chemicals into the water stream.

Assist communities in the Route 146 corridor in coordinating management approaches to land use issues associated with growth: the new interchange, new employment centers, increased land demand for different uses, stressed water resources and the loss of traditional landscapes.

Millbury/Grafton

Assist communities in the Route 146 corridor in coordinating management approaches to land use issues associated with growth: the new interchange, new employment centers, increased land demand for different uses, stressed water resources and the loss of traditional landscapes.

Support the Grafton Land Trust in its efforts to protect land around the Grafton Common, which will preserve natural resources as well as enhance a landmark setting for cultural resources.

Upton/Hopedale/Mendon

Support the protection of unique resources such as Peppercorn Hill Fen and Miscoe Spring and the expansion of conservation areas.

Support implementation of “catch and release” angling to ensure sustainable wild trout populations.

Sutton/Northbridge/Uxbridge/Douglas

Encourage responsible development throughout the region in the form of compact growth patterns that respect traditional landscapes, a scale of buildings that respects community character and uses that do not degrade natural resources.

Support the implementation and enforcement of the Rivers Protection Act and identify additional wild trout streams in the watershed, to be protected.

Millville/Blackstone/Woonsocket

Promote the Technical Assistance Program funded by the Environmental Protection Agency to reduce toxins coming into wastewater treatment facilities through community awareness and participation.

Encourage the ACOE to allow vegetation to become reestablished on rip rap along sections of the Blackstone River in Woonsocket and Blackstone.

Burrillville/Glocester

Support towns and RIDEM in protecting farmland and forests to facilitate the implementation of the North/South Trail.

North Smithfield/Smithfield

Support efforts to establish Greenways and encourage the National Park Service's Rivers and Trails program to extend technical support along the Woonasquatucket into Smithfield.

Explore the long-term protection of apple orchards and other farming activities in Smithfield and North Smithfield.

Cumberland/Lincoln

Collaborate with the Town of Cumberland to build public support for development strategies which accommodate up to 50% for open space preservation, such as those adopted in Lincoln.

Work with local land trusts and local conservation organizations to protect open space surrounding critical natural resources such as Pine Swamp, the Albion Floodplain forest, Long Brook and Ash Swamp.

**Central Falls/Pawtucket/Providence/
East Providence**

Assist communities in working together to encourage cooperation for Greenway development and increased access to the River.